

1. In a method for forming a pattern onto an article during an injection molding thereof, comprising the steps of:

heating said pattern-bearing film by a heating board so as to soften it, said heating board having a heating surface and being movable into and away from a space between said male mold and said female mold;

causing said male mold and said female mold with said pattern-bearing film therein to approach each other to form a closed molding cavity; and

the improvement comprising the step of:

fixing a distal end of the pattern-bearing film by a film fixing frame arranged at a downstream-side of the female mold along the film feeding direction;

fixing the pattern-bearing film on the parting surface of the female mold, whereby the heating board is moved into a position where the heating surface thereof is opposed to the pattern-bearing film fixed on the parting surface, and then the pattern-bearing film is softened by the heating surface of the heating board means.

2. In an apparatus for forming a pattern onto an article during an injection molding thereof, comprising:

means for feeding a pattern-bearing film to a molding position where a male mold and a female mold are opposed;

heating board means for heating said pattern-bearing film so as to soften it, said heating board means having a heating surface and being movable into and away from a space between said male mold and said female mold;

means for transferring said pattern-bearing film to an internal surface of said female mold so as to contact said pattern-bearing film with said internal surface;

means for causing said male mold and said female mold with said pattern-bearing film therein to approach each other to form a closed molding cavity; and

resin injecting means for injecting a molten resin into said cavity to form a molded article to adhere said pattern-bearing film to the surface of said article,

the improvement comprising:

a film suppressing frame for fixing said peripheral portion of said pattern-bearing film which has fed by said feed means;

fitting groove means, defined on the periphery of a parting surface of said female mold, for holding the film suppressing frame; and

a sliding rod, slidably supported within a through-hole formed in the female mold and extended through the parting surface thereof, for moving the film suppressing frame so that the film suppressing frame is pressed into the fitting groove means with the pattern-bearing film interposed therebetween, whereby the heating board is moved into a position where the heating surface thereof is opposed to the pattern-bearing film fixed on the parting surface, and then the pattern-bearing film is softened by the heating surface of the heating board means.

3. In an apparatus for forming a pattern onto an article

during an injection molding thereof, comprising:

means for feeding a pattern-bearing film to a molding position where a male mold and a female mold are opposed;

heating board means for heating said pattern-bearing film so as to soften it, said heating board means having a heating surface and being movable into and away from a space between said male mold and said female mold;

means for transferring said pattern-bearing film to an internal surface of said female mold so as to contact said pattern-bearing film with said internal surface;

means for causing said male mold and said female mold with said pattern-bearing film therein to approach each other to form a closed molding cavity; and

resin injecting means for injecting a molten resin into said cavity to form a molded article to adhere said pattern-bearing film to the surface of said article,

the improvement comprising:

a pair of holding members, arranged on both sides of the female mold, for holding the heating board means so as to be opposed to the parting surface of the female mold; the holding members being movable along a direction connecting the male and female molds so as to press the heating board means to the female mold.

4. In an apparatus for forming a pattern onto an article during an injection molding thereof, comprising:

means for feeding a pattern-bearing film to a molding position where a male mold and a female mold are opposed;

heating board means for heating said pattern-bearing film so as to soften it, said heating board means having a heating surface and being movable into and away from a space between said male mold and said female mold;

means for transferring said pattern-bearing film to an internal surface of said female mold so as to contact said pattern-bearing film with said internal surface;

means for causing said male mold and said female mold

said pattern-bearing surface to form a closed cavity by injecting molten material into the cavity to form a pattern-bearing film thereon. The improvement which is claimed is in the said heating board, and each block of heat generated

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5. In an apparatus for forming a mold during an injection molding there is means for feeding a pattern-bearing film to a position where a male mold and a female mold heating board means for heating said film so as to soften it, said heating board means being movable relative to said heating surface and being movable to bring said space between said male mold and said female mold means for transferring said pattern-bearing film to the internal surface of said female mold means for feeding said pattern-bearing film with said resin means for causing said male mold means for moving with said pattern-bearing film means for closing other to form a closed molding cavity means for injecting resin injecting means for injecting said resin into said cavity to form a molded part means for feeding said pattern-bearing film to the surface of said female mold the improvement comprising: means for providing insulation board means for covering the surface of the heating board means for heating said means is waiting at a standby position means for moving the space between the male and female mold

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position where a male mold and a female mold are opposed;

heating board means for heating said pattern-bearing film so as to soften it, said heating board means having a heating surface and being movable into and away from a space between said male mold and said female mold;

means for transferring said pattern-bearing film to an internal surface of said female mold so as to contact said pattern-bearing film with said internal surface;

means for causing said male mold and said female mold with said pattern-bearing film therein to approach each other to form a closed molding cavity; and

resin injecting means for injecting a molten resin into said cavity to form a molded article to adhere said pattern-bearing film to the surface of said article,

the improvement comprising:

heating wire means, arranged at the upstream-side of the female mold along the film feeding direction, for heating the pattern-bearing film so as to cut it into a proceeding portion and a following portion thereof when the heating board means is pressed into the parting surface of the female mold.

add B9